

CLAIMS

1. An engine control apparatus for determining engine position from intake air pressure fluctuations, comprising:
 - (a) an engine having at least one cylinder, a piston in said cylinder, a crankshaft connected to said piston, said piston being adapted to reciprocate between top dead center position and bottom dead center position defining a combustion chamber, an intake valve controlling the induction of an air mass into said combustion chamber with predetermined timing related to said crankshaft's angular position, said engine air induction system having its chamber contiguous with said valve and said engine combustion chamber, a pressure sensing element in communication with said air induction chamber;
 - (b) a pressure sensor means for developing periodic sensor voltage timing pulses, the cycle time between timing pulses being an indication of engine crankshaft speed, and the pulse timing being an indication of a particular crankshaft degree of angular position;
 - (c) a means for measuring in real-time, cycle time and crankshaft position;
2. The combination set forth in Claim 1 wherein said engine control apparatus is in combination with an additional sensory means to detect crankshaft position.
3. The combination set forth in Claim 2 wherein said engine control apparatus comprises redundant means to determine crankshaft position, where in the event of singular sensory component failure, the engine control apparatus is capable of determining crankshaft position to maintain engine run capability.